Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A field effect transistor integrated on a semiconductor substrate having an active area, the field effect transistor comprising:

a source region and a drain region formed in the semiconductor substrate;

a channel region interposed between said source and drain regions having a predefined nominal width in a first direction that is perpendicular to a second direction that extends through the source, drain, and channel regions; and

first and second doped regions formed in the substrate on opposite sides of the channel region, the first and second doped regions defining a variable doping profile in the first direction, the channel region having an effective width defined by ~~a~~ the variable doping profile in the first direction.

2. (Currently Amended) The field effect transistor according to claim 1, wherein the ~~variable doping profile is one of~~ doped regions are part of a continuous doped region ~~implanted adjacent to the transistor~~that completely surrounds the source, drain, and channel regions.

3. (Currently Amended) The field effect transistor according to claim 2, wherein the effective width is a function of a distance of the continuous doped region from ~~the~~ an active area that includes the source, drain, and channel regions.

4. (Original) The field effect transistor according to claim 1, wherein the doping profile has a minimum of concentration at a center of the channel region.

5. (Currently Amended) The field effect transistor according to claim 1, wherein the doping profile increases with continuity from a center of the channel region to an edge of the ~~active area~~channel region.

6. (Currently Amended) A transistor structure, comprising:

a first field effect transistor integrated on a semiconductor substrate having an active area, the first field effect transistor including:

a source region and a drain region formed in the semiconductor substrate; and

a channel region interposed between said source and drain regions having a predefined nominal width in a first direction that is perpendicular to a second direction that extends through the source, drain, and channel regions, the channel region having a first effective width defined by a variable doping profile in the first direction, the variable doping profile being defined by first and second doped regions on opposite sides of the channel region; and

a second field effect transistor coupled in parallel to the first field effect transistor, the second field effect transistor having a second effective width.

7. (Previously Presented) The field effect transistor of claim 6 wherein the second effective width of the second field effect transistor is smaller than the first effective width of the first field effect transistor.

8. (Previously Presented) The field effect transistor of claim 6 wherein the second effective width of the second field effect transistor is the same as the first effective width of the first field effect transistor.

9. (Currently Amended) A field effect transistor comprising:

an active area formed in a semiconductor substrate;

a source region and a drain region formed in the active area;

a channel region interposed between said source and drain regions and having a first nominal width in a first direction that is perpendicular to a second direction that extends through the source, drain, and channel regions; the channel region having a variable doping profile in the semiconductor substrate extending in the first direction from no additional dopant in a center of the channel region to a concentrated amount of dopant at edges of the channel region, wherein an effective channel width of the channel region is relative to an amount and concentration of dopant in the channel region;

a first doped region formed in the substrate extending along an entire first side of the active area from a position beyond the source region in the second direction to a position beyond the drain region in the second direction; and

a second doped region formed in the substrate extending along an entire second side of the active area from a position beyond the source region in the second direction to a position beyond the drain region in the second direction, the second side being opposite to the first side.

10. (Previously presented) The field effect transistor of claim 9, wherein the variable doping profile is one of a doped region implanted adjacent to the transistor.

11. (Previously Presented) The field effect transistor of claim 10, wherein the effective channel width is a function of a distance between the doped region and the active area.

12. (Original) The field effect transistor of claim 9, wherein the doping profile decreases with continuity from the edge of the active area to the center of the channel region.

13. (Previously Presented) The field effect transistor of claim 1 wherein the field effect transistor is a first field effect transistor, further comprising a second field effect transistor coupled in parallel to the first field effect transistor, the second field effect transistor having a second effective width.

14. (Previously Presented) The field effect transistor of claim 13 wherein the second effective width of the second field effect transistor is smaller than the effective width of the first field effect transistor.

15. (Previously Presented) The field effect transistor of claim 13 wherein the second effective width of the second field effect transistor is the same as the effective width of the first field effect transistor.

16. (Cancelled)

17. (Currently Amended) The field effect transistor of claim ~~16~~ 9 wherein the first and second doped regions extend beyond third and fourth sides of the active area, the third and fourth sides being opposite to each other and transverse to the first and second sides.

18. (Previously Presented) The field effect transistor of claim 17, wherein the effective channel width is a function of a distance between the first and second doped regions.